

ABSTRACT OF THE DISCLOSURE

A data transmission system that detects fiber faults receives a plurality of data packets carried on a plurality of Gigabit Ethernet links at a plurality of Gigabit Ethernet
5 input/output ports. The system then multiplexes, on a bit by bit basis, the data packets onto an optical link. When the system detects a loss of signal in one of the Gigabit Ethernet links, a signal loss code insert is generated. The system then multiplexes the signal loss code insert with the data packets.